

CP-205 TIAC* 21 Channel System/360 Input Data System

**GEO
SPACE**
COMPUTER DIVISION

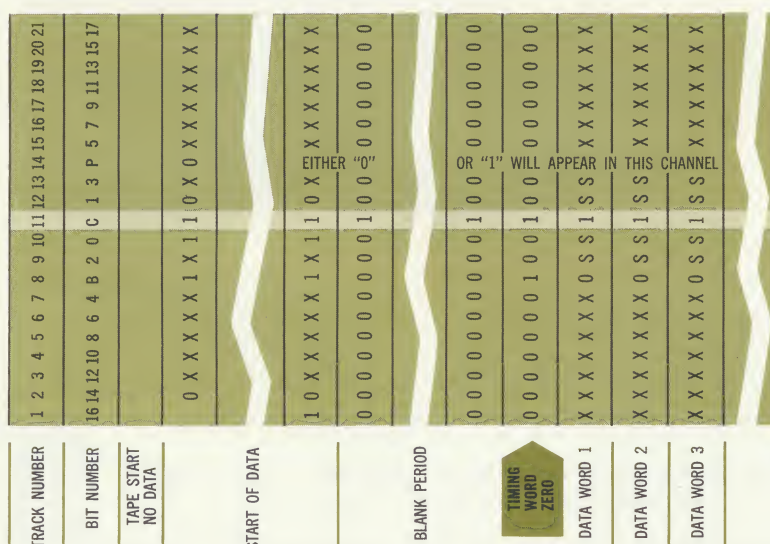
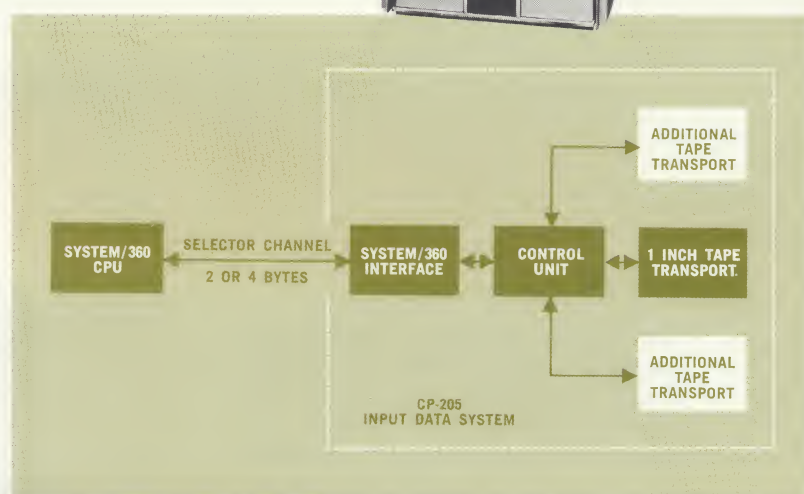
Features

- ◆ Reads TIAC* 21 Channel, One Inch Magnetic Tape
- ◆ Formats 21 Channel Data to System/360 Format
- ◆ Program Panel Variable Output Format
- ◆ Control Unit **Search** for System Efficiency
- ◆ Single Capstan Drive Tape Transport
- ◆ Additional Tape Transports Can Be Added to Control Unit



System Description

Geo Space's CP-205 Input Data System utilizes an advanced design, single capstan drive magnetic tape transport. Twenty-one channel *Read* electronics are provided which read TIAC 21 channel magnetic tapes. A tape transport *Control Unit* drives the tape transport drive and *Read* electronics under command from the CP-205 Interface electronics. Data read from the TIAC 21 channel tape can be formatted in 2 or 4 *byte* data blocks by using a program panel that can be patch-wired. Variable format of the individual TIAC word bits can be located in any location in a System/360 half word (2 bytes) or full word (4 byte) configuration.



TIAC Tape Format

TIAC 21 channel magnetic tape is recorded at a packing density of 356 bits per inch. Tape speeds during recording, are 90 inches per second for one millisecond sampling rates, 45 inches per second at 2 milliseconds sampling rate or 22½ inches per second at 4 milliseconds sampling rate.

A TIAC data word consists of 18 binary bits plus one bit each for block, clock time and parity. The *block bit* is used to identify start-of-data, the timing word associated with the start of each 31 word data block and to maintain frame synchronization. *Clock bits* are used for timing of read operations on track No. 11 to minimize skewing effects.

System Operation

Geo Space's CP-205 Input Data System is electrically connected to a System/360 Selector Channel. TIAC 21 channel tape reels are placed on a servo drive hub. The System/360 Computer interrogates the selector channel to ascertain that the CP-205 System is in readiness for reading the tapes. Prior selection of 21 channel to 2 or 4 byte format has been programmed through the program patch panel in the CP-205 System.

TIAC tapes are read at recorded speeds and formatted to acceptable input data conventions for System/360. A *search* feature (optional) provides CP-205 hardware capability to search a TIAC tape for a specific record number for reading under program control.

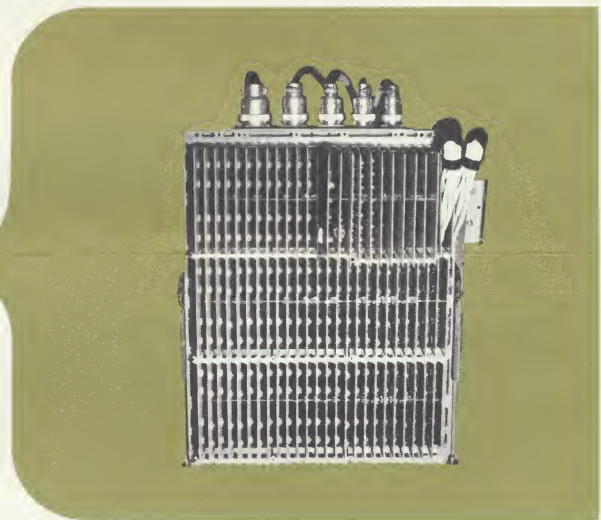
Geo Space furnishes a CP-205 test program operable under the System/360 8K BOS system support software.

Specifications

Tape Transport	21 channel <i>Read</i> electronics. Single capstan drive. 4 ms Stop-Start time.
Data Transfer Rate	128 KByte to System/360
TIAC System/360 Format	Variable by a 21 to 32 bit programmable patch panel into 2 or 4 byte input to System/360 format.
System Cabling	To IBM System/360 Selector Channel.
Search Feature	Optional. Can be furnished to search for specific record under CPU command.
Test Program	Geo Space furnished test program operating under System/360 8K BOS.
Power Requirements	115 volts $\pm 10\%$ @ 10A, 60 cps, single phase. Other power requirements optional.
Physical Dimensions	68 $\frac{1}{2}$ " Height, 27" Width, 26 $\frac{1}{2}$ " Depth. Weight, 500 lbs. (approximate).

Interface

Geo Space supplies a System/360 interface integral with the CP-205 Input Data System. All circuit components used in the interface electronics are card-mounted, monolithic integrated semiconductor logic devices. The entire interface logic subsystem is carried in an IBM SMS gate. The SMS gate slides out on rollers for extremely accessible maintenance. Circuit card connections are made by military-proven, wire wrapping techniques.



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